Ford Motor Company, Cleveland Branch Assembly Plant
Euclid Avenue and E. 116 Street
Cuyahoga County
Cleveland
Ohio

Historic American Engineering Record
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US Department of Interior
Washington, DC 20243

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The Ford Motor Company
Cleveland Branch Assembly
Plant

NAME: Ford Motor Company--Cleveland Branch Assembly Plant

LOCATION: Cleveland, Ohio

DATE OF SETTLEMENT: 1905

PRESENT OWNER: Small business

PRESENT USE: warehouse; offices, artists studios

SIGNIFICANCE: Influenced Cleveland's factory design by being one of the first multi-story reinforced concrete auto plants in the city. The first Detroit-owned automobile plant in Cleveland and the last auto assembly plant in the city to close during the Depression.

HISTORIAN: Tom Fisher

The Ford Motor Company
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The Ford Motor Company's branch assembly plant was the first Detroit-owned automobile plant in Cleveland and the last auto assembly plant in the city to close during the Depression. In addition, it was one of the first multi-story reinforced concrete auto plants in Cleveland, greatly influencing factory design within the city's auto industry.

The concept of branch assembly plants was "established early in (Ford's) history."[1] "The branch house system enabled the company to control prices and service throughout the country. This was important because of the volume of the company's business and because of the service required on the Ford car."[2]

In August, 1905, Ford opened its first branch store in Cleveland at 1900 Euclid Avenue.[3] By 1911, the company had also opened a service shop at E 72nd Street and St. Clair Avenue. Although this shop did assemble knocked-down Ford cars shipped from Detroit, the shop mainly functioned as a storage and repair facility.[4]

That same year, 1911, Ford built its first two branch assembly plants in Kansas City, Missouri and Manchester, England.[5] "These were multi-story buildings of reinforced concrete following the format of the Highland Park work."[6] Ford's Highland Park plant, near Detroit, featured a four-story assembly building. Elevators hoisted raw materials and parts, machined in an adjacent one-stoty shop, to the building's upper floors. Sub-assemblies then moved

through the various floors on gravity chutes. Trimming and upholstery departments occupied the fourth floor; painting and wheel assembly departments, the third; body assembly departments, the second, and final assembly and repair departments, the first.[7]

In 1914, Ford added a six-story addition to its Highland Park plant. Although the addition maintained the earlier plant's vertical organization of departments and the some of the gravity chute assembly process, the addition differed in two important respects. Instead of elevators, the addition used traveling electric cranes to hoist materials from an enclosed rail siding to the various floors. And, instead of a concrete post-and-beam structure, the addition used flat-slab concrete construction, enclosing air ducts within its mushroom columns.[8]

This addition to the Highland Park plant had a direct bearing upon Ford's branch assembly plant in Cleveland. Both originated from the same Detroit architectural firm, Albert Kahn and Associates. Both were designed at about the same time, in the early part of 1914. Both used flat-slab concrete construction. And both had rail sidings enclosed within full-height craneways.

The two plants differed in size, function, and detail. The Cleveland branch assembly building stands on a 312 foot by 157 foot site on Euclid Avenue near E. 116th Street. The structure itself is 157 feet wide and 294 feet deep, with four floors and a basement. Although Albert Kahn's original design called for two assembly buildings connected by a central craneway, Ford built

only the craneway and one assembly wing. The craneway's outside wall, with an exposed concrete frame and projecting brackets, suggests that Ford had intended to complete Kahn's original plans.

I timber train tressle stands at the back of the building. It carried a rail siding from the adjacent Nickel Plate Railroad tracks across E. 117th Street and into the craneway at the second floor level. Next to this tressle stood truck docks and an automobile service and storage area. In 1923, Ford buried a 12,000 gallon gasoline tank beneath the concrete apron, 75 feet from the rear of the building.[9]

The plant's architectural treatment and fenestration varies greatly. Full-height industrial sash windows set within the concrete structural frame light the craneway, which extends almost the entire length of the building's northeast side. A brick housing above the craneway contains a gabled skylight and horizontal metal-framed clerestory windows. The building's rear elevation contains regular rows of metal, industrial sash windows with continuous concrete lintels and brick spandrels. Brick also encloses the parapet snd the three stair and elevator housings on the roof.

Alont the southwest property line, the building has a full-height poured-in-place concrete wall. A light well on the upper three floors, about 160 feet long and 25 feet deep, contains metal-framed windows and a row of sawtooth skylights behind the first floor parapet. The front end of that concrete wall originally contained a painted version of Ford's logo.

The Euclid Avenue facade is the building's most elsborate. Probably the work of Albert Kahn's sssociate, Ernest Wilby, the facsde has a gabled brick and terra cotta parapet over the crane-way, featuring a blind oculus and a panel that also contained the Ford logo.[10] Beneath that, a terra cotta dentiled cornice extends the entire width of the facade, with tile inserts over each pier snd segmental srches over five window bays. The brick piers have inset brick panels snd green tile ornaments that repeat in the fourth floor spandrels. The first floor has a less elaborate terrs cotta cornice. Full-height show windows fsce Euclid Avenue.

Except for the first floor's 16 foot height, the building's standard floor to ceiling dimension is 12 feet. Each floor is 6 bays wide and 11 bays long, with the rear bays about 30 feet square and those along Euclid Avenue slightly smaller. Solid, octsgonal mushroom columns with drop capitals support the flat-slab floors. Because the factory did not have its own boiler house, a perimeter hot water radiator system replaced the in-column forced air system that Kahn designed for Ford's Highlsnd Psrk addition. The structure has stair towers at its northeast and southwest corners. Enclosed with briok and hollow tile walls, the stairs are poured-in-place concrete. An open marble stair stands opposite the corner entrance and connects the first and second floors. In addition to the passenger elevator that abuts thst public stairwsy, two freight elevators with adjoining concrete stairs occupy the center bsy

near the front and back of the building.

The first floor of the Cleveland branch assembly plant contained showrooms and sales offices facing Euclid Avenue. One bay had an overhead door which led to the service and repair garage at the rear of the first floor. General offices for the branch plant occupied the Euclid Avenue end of the second floor. Ford used the rear of the second floor and the entire third and fourth floors for the "assembly of machines."[11]

Although the details of the assembly process within the Cleveland branch plant have not been uncovered, we do know that it followed the Highland Park format, with storage located on the upper floors, trimming and painting on the middle floors, and final assembly on the bottom floors.[12] The building itself reflects that organization. Elevators give access to the roof, suggesting its occasional use for storage. A concrete pad with a central drain on the third floor was probably used in the rubbing and varnishing of bodies, while the second floor's direct access to the rail siding and elevator access to the first floor show room suggests its use as a final assembly area.

We also know that Ford bought many of its parts from outside suppliers in 1914 and that it assembled major components such as engines, axles, and frames at its Detroit factories.[13] Once again, the building reinforces those facts. It contains no evidence of holes let into the floor for gravity chutes nor of ceiling mounted brackets for machine shafting. If nothing else, the craneway, which

occupiea almost 1/5 of the manufacturing area, underscores the Cleveland branch assembly plant's reliance on shipped goods.

John H. Graham, a Cleveland architect, served as the project supervisor for the Ford branch plant. He received bids on July 15, 1914, with contractors' estimates in the $500,000 range. A controversy soon arose when Henry Ford wrote a letter requesting that an open shop, with both union and nonunion labor, be used in erecting the plant.[14] Because the Ford company had used open shop methods successfully in other branch plants and because the company had a reputation as a friend of labor, Cleveland's strong unions did not protest Ford's request. As one union leader said, "Henry Ford's policy in the matter of wages has done so much for labor that we might be said to be ungrateful if we objected to this building policy."[15] The Cleveland branch plant was completed, without further complications, in the early part of 1915. Model T production began almost immediately.

In 1915, B. E. Atwood served as the plant's general manager.[16] F. E. McClure replaced him in 1916.[17] With America's entrance into World War I, Ford offered the Cleveland branch plant to the government, which used it to store war materials through 1918.[18] The following year, Model T production resumed under the management of E. M. Fillmore.[19]

In 1923, Ford converted Cleveland's branch plant, among others, to the "improved moving assembly" process, installing "the latest machine-tool equipment ... paing spray booths and drying ovens."[20]

Although Cleveland's plant had enough floor space to accommodate an assembly line, its central elevator shafts posed a problem. As one Ford official recalled, the elevators "were right in the middle of the floor ... where you couldn't put any conveyors or progressive machinery or equipment."[21]

Albert Kahn's office completed the improvements at the Cleveland factory in 1924. The following year, under the management of Allen B. Pease, the plant reached a peak production of 225 vehicles per day, employing 1,600 people.[22] On May 31, 1927, the last Model T moved off of the Cleveland assembly line. Ford closed the plant and retooled for production of its new Model A, which began on November 1, 1927.[23]

Without interrupting Model A assembly, the Ford company continued to alter its Cleveland factory. In the fall of 1929, Ford filled in the craneway at the fourth floor level, with Charles Schubert engineering the 265 foot by 30 foot platform and The Krebay Construction Company erecting it.[24] Two years later, Albert Kahn's office designed a 237 foot by 50 foot storage platform and a 3 inch plank floor.[25]

In 1931, The Ford Motor Company suffered a $53,000,000 loss.[26] As a result, the company decided to retool for its production of the roomier Model B. The new model sold well after its May, 1932, debut, but, by the end of the year, the Cleveland branch office was selling only 274 automobiles per month, a drop in sales of over 55%.[27] Ford Ended manufacturing at its Cleveland branch

plant in December, 1932. The building continued to house Ford's branch ssles office and distribution center until the onset of World Wsr II, when the company gave the factory to the government. After the war, the building was sold.

Subsequent owners have used the building as a wsrehouse snd for offices and artists studios. Changes to the original structure include the filling in of the cranewsy spsce at the third floor level; the addition of s steel-framed, ateel-clad tower along the southwest wall; the addition of a brick and concrete truck dock at the rear of the building; the replacement of the industrial sash windows on the southwest elevation with smaller double-hung units; the end osing of the marble stairway and show rooms on the first floor; and the boarding up of the skylights and first floor windows. All of the Ford machinery and equipment has also been removed.

While the Cleveland assembly plant typified Ford's branch plsnt system, it stood far in advance of other organization snd flat-slab construction reappeared in virtually every major suto plant built in Cleveland after that date.

(Ford) Footnotes

1. Allen Nevins and Frank Ernest Hill, Ford, The Time, The Man, The Company, Charles Schribner's Sons, New York, 1954, p 651.
2. Ibid.
3. Ibid., p 265.
4. Wager, Golden Wheels, p 138.
5. Ibid.
6. Grant Hildebrand, Designing for Industry, The Architecture of Albert Kahn, MIT Press, Cambridge, 1974, p 124.
7. Horace Lucien Arnold and Fay Leone Faurote, Ford Methods and Ford Shops, Engineering Magazine Company, New York, 1919, foldout plans.
8. Ibid.
9. Cleveland Building Permits, Cleveland City Hall.
10. Hildebrand, Designing for Industry, p 59.
11. "Insists Open Shop Build Ford Block," Cleveland Plain Dealer, July 16, 1914, p 13.
12. Hildebrand, Designing for Industry, p 124.
13. Harold Katz, The Decline of Competition in the Automobile Industry: 1920-1940, Arno Press, New York, 1977, p 251 f.
14. "Insists Open Shop, "Plain Dealer, July 16, 1914, p 13.
15. Ibid.
16. Cleveland City Directory, 1915.
17. Ibid., 1916.
18. Wager, Golden Wheels, p 140.
19. Cleveland City Directory, 1919.
20. Allan Nevins and Frank Ernest Hill, Ford, Expansion and Challenge - 1915 - 1933, Charles Schribner's Sons, New York, 1957, p 256.
21. Ibid.
22. Wager, Golden Wheels, p 140.
23. Ibid.
24. Cleveland Building Permits, Cleveland City Hall.
25. Ibid.
26. Wager, Golden Wheels, p 142.
27. Ibid.
28. Ibid.

Addendum to

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HAER No. OH-11E

PHOTOGRAPHS

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National Park Service
Department of the Interior
Washington, D. C. 20240